PHEIDOLE ICENI N. SP. (HYMENOPTERA: FORMICIDAE), A NEW ANT FOR AN OLD INSTITUTION

Pheidole iceni n. sp., una nueva hormiga para una institución antigua

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ABSTRACT
Pheidole iceni a new species of ant (Formicidae: Myrmicinae) is described based on soldiers and workers from Chocó, Colombia. The ant is named in honor of the Instituto de Ciencias Naturales of the National University of Colombia in its 75th anniversary.

Key words. Colombia, Formicidae, *Pheidole,* New Species, Myrmicinae.

RESUMEN
Se describe la nueva especie de hormiga *Pheidole iceni* (Formicidae: Myrmicinae) con base en obreras mayores y menores de Chocó, Colombia. La hormiga se nombra en honor al Instituto de Ciencias Naturales de la Universidad Nacional de Colombia en conmemoración a su aniversario 75 de su fundación.

Palabras clave. Colombia, Formicidae, *Pheidole,* Nueva especie, Myrmicinae.

INTRODUCTION

Although the isolated description of a new species is not recommended, this "rule" can be broken at times when the new species is part of an important study in biology, when it justifies some important nomenclature change, or when it is desired to offer homage to some colleague or institution. In this case, the latter argument is used to justify the description of a new species in the genus *Pheidole*.

METHODS

For general discussion about characters in *Pheidole* see Wilson (2003) and Longino (2009) and *Pheidole Working Group* web page (see Longino 2009). The measurements of both castes follow Longino (2009). Observations were made at 40 to 80x magnification with an Optical Instruments dissecting microscope. Measurements were made at 80X. Automontage pictures were taken by Claudia Ortiz and Gary Alpert at MCZ with dissecting microscope Leica MZ16 and digital camera Leica DCF 420 with the Leica software Application Suite 3.7 - Helican Focus 5.1.

Measurements

Minor and major workers

HL: head length; in full-face view, maximum length of head, from line tangent to anteriormost projection of head capsule or clypeus to line tangent to posteriormost projection of vertex margin (including occipital carina, if visible).
HLA: anterior head length; in full-face view, distance between line tangent to anteriormost projection of head capsule or clypeus and line

tangent to lowermost margin of compound eye.
HW: head width; in full-face view, maximum width of head capsule not including eyes.
SL: scape length; length of scape shaft from apex to basal flange, not including basal condyle and neck.
EL: eye length; maximum length of compound eye, with head oriented to maximize length (i.e., not full-face view).
ML: mesosoma length; in lateral view, distance from base of anterior face of pronotum (at inflection point between downward-sloping anterior face and flange-like anteriormost projection of pronotum [the latter extending to foramen and usually partially hidden by head capsule]) to posteriormost extension of metapleural or propodeal lobes (whichever extends further).
PSL: propodeal spine length; viewed laterally such that side of spine is roughly perpendicular to viewing angle, distance from inflection point between dorsal face of propodeum and base of spine to tip of spine.
PMG: depth of promesonotal groove; measured by establishing a line tangent to dorsalmost convexities of pronotum and mesonotum, measuring perpendicular distance from this line to bottom of promesonotal groove.
SPL: propodeal spiracle width, measured from the outer edge of cuticular ring that surrounds orifice.
PTW: petiole width; maximum width of petiole in dorsal view.
PPW: postpetiole width; maximum width of postpetiole in dorsal view.
CI: cephalic index; 100*HW/HL.
SI: scape index; 100*SL/HW.
PSLI: propodeal spine index; 100*PSL/HL.
PMGI: Promesonotal groove index; 100*PMG/HL.
SPLI: Propodeal spiracle index; 100*SPL/HL.
PPI: Postpetiole index; 100*PPW/PTW.

Major workers only

IHT: distance between inner hypostomal teeth.
OHT: distance between outer hypostomal teeth.
HTI: Hypostomal tooth index; 100*IHT/OHT.
When hypostomal teeth are curved laterally (either inward or outward), the approximate midpoint of the base of the tooth is used, not the tip.

Repositories

ICN. Insect Collection, Instituto de Ciencias Naturales, Universidad Nacional de Colombia, Bogotá D.C., Colombia.
MCZ. Museum of Comparative Zoology, Cambridge, MA, USA.
MZSP. Museum of Zoology, Universidade de São Paulo, SP, Brazil.

TAXONOMY

Pheidole iceni **new species**

Figures 1 & 2

Holotype major worker. Colombia, Chocó, La Balsa, Estación Silvicultural Bajo Atrato, 7º02'N 77º20'W, 1.ii.1994, F. Ferro leg. (deposited in ICN).
Paratypes: Seven major workers, four minor workers, same data as holotype, deposited in ICN, MCZ and MZSP.
Geographic Range
Colombia (Chocó).
Diagnosis
With the general habitus of *Pheidole fiorii* Emery in the *P. fallax* group (Wilson 2003:291). Minor worker: head smooth and shining *versus* foveolated and opaque / subopaque (*fiorii*); side of propodeum smooth and shining *versus* with some foveolated (*fiorii*); metanotal groove deeply impressed *versus* shallowly impressed (*fiorii*). Major worker: dorsal surface of

mandible flat to weakly convex *versus* with broad concavity covering basal half of dorsal surface (*fossimandibula)*; clypeus with large setal tufts in the form of pompons *versus* smooth and flat (*vestita*) or with weak gibbosities (*fossimandibula*), setae sparse to abundant but not in form of pompons (*fossimandibula, vestita*); face between frontal carinae with large hemispherical concavity *versus* simple, typically convex (*fossimandibula, vestita*).

Description of minor worker

Measurements (paratype): HL 0.90, HW 0.65, HLA 0.33, SL 1.18, EL 0.14, ML 1.24, PSL 0.36, PMG 0.05, SPL 0.037, PTW 0.13, PPW 0.21, CI 72, SI 182, PSLI 40, PMGI 5.5, SPLI 4.1, PPI 162.

Mandible and clypeus smooth and shining; three spaced concentric rugae around antennal insertion, otherwise face smooth and shining; posterior margin of vertex rounded; occipital carina well developed, visible in full face view; scape with abundant erect setae as long as maximum width of scape and abundant reclined setae; promesonotal groove present; metanotal groove deeply impressed; propodeal spines long, thin, downturned; promesonotum smooth and shining; katepisternum and lateral and dorsal faces of propodeum with irregular rugulae; abundant setae (around 0.15 mm length or less) on all body; dorsal (outer) margin of hind tibia with abundant suberect setae longer than maximum width of tibia; first gastral tergum smooth and shining; color light brown.

Description of major worker

Measurements (holotype): HL 1.73, HW 1.36, HLA 0.41, SL 0.61, EL 0.22, ML 1.41, PSL 0.05, PMG 0.00, SPL 0.07, PTW 0.29, PPW 0.49, IHT 0.25, OHT 0.54, CI 79, SI 45, PSLI 3, PMGI 0, SPLI 4, PPI 168, HTI 45.

Mandible smooth and shining, somewhat flattened dorsally, with abundant piligerous punctae and an even covering of long decumbent yellow setae; clypeus with two large, horn-like gibbosities, but these covered from view by prominent tufts of yellow setae that are erect at base, densely clustered on gibbosities like sheaves of wheat, and then curve and become matted distally, forming globose pompons; frontal carinae slanting obliquely outward posteriorly, forming dorsal margins of prominent antennal scrobes, ventral margin of scrobe not sharply defined; scrobe, side of head, and vertex lobes coarsely reticulate rugose; area between frontal carinae and entire middle of face with a deep hemispherical concavity; anterior portion of concavity with dense layer of minute piligerous puncta from which arises a dense, short, yellow pubescence; posterior portion of concavity grading into regular concentric rugae with somewhat longer pubescence; rim of concavity with long, whisker-like setae laterally and posteriorly, basket-like; rest of face and sides of head with abundant erect setae; scape microsculptured and dull, not shining, terete at base, with abundant erect setae longer than maximum width of scape; hypostomal margin straight; median tooth small; inner hypostomal teeth pointed, stout, about one half distance from midline to outer hypostomal teeth; promesonotal groove absent; propodeal spines present; pronotum with reticulate rugae on humerus, sparse transverse carinulae anterolaterally, otherwise generally smooth and shining; rest of mesosoma generally shining, with some irregular rugulae and foveolae; dorsal (outer) margin of hind tibia with abundant suberect setae longer than maximum width of tibia; pilosity abundant on mesosomal dorsum; postpetiole in dorsal view strongly lenticular, much broader than long; first gastral tergite with small patch of longitudinal etched microsculpture near postpetiolar insertion, smooth and shining elsewhere, with abundant long erect yellowish setae; color dark red brown.

Biology

Major and minor workers taken in low rainforest during the day.

Fig. 1. *Pheidole iceni* n. sp. Paratype, major worker. A. Head in frontal view. B. Body in dorsal view. C. Body in lateral view.

Fig. 2. *Pheidole iceni* n. sp. Paratype, minor worker. A. Head in frontal view. B. Body in dorsal view. C. Body in lateral view.

Comments

The smooth and shining head, well developed occipital carinae, and long, downturned propodeal spines differentiate the minor worker of this species of any other in the genus and *fallax* group. *P. fiorii* Emery is near to this species, but with clear differences (see diagnosis), including setae (shorter in *iceni*) and color (light brown in *iceni*) and smooth and shining pronotum, sides of petiole (variably foveolated in *fiorii*).

Etymology

The name is in reference to the 75th anniversary of the Instituto de Ciencias Naturales of the Universidad Nacional de Colombia, Bogotá, D.C. Througout its history the ICN has contributed greatly to the study and understanding of the biological diversity of Colombia and the Neotropics as a whole.

ACKNOWLEDGEMENTS

Lauren Raz (ICN) for English improvement. To Claudia Ortiz (ICN) and Gary Alpert (MCZ) for taking the pictures of the ants, and to the two evaluators for their comments.

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Recibido: 23/04/2011
Aceptado: 19/10/2011